

FIG. 1

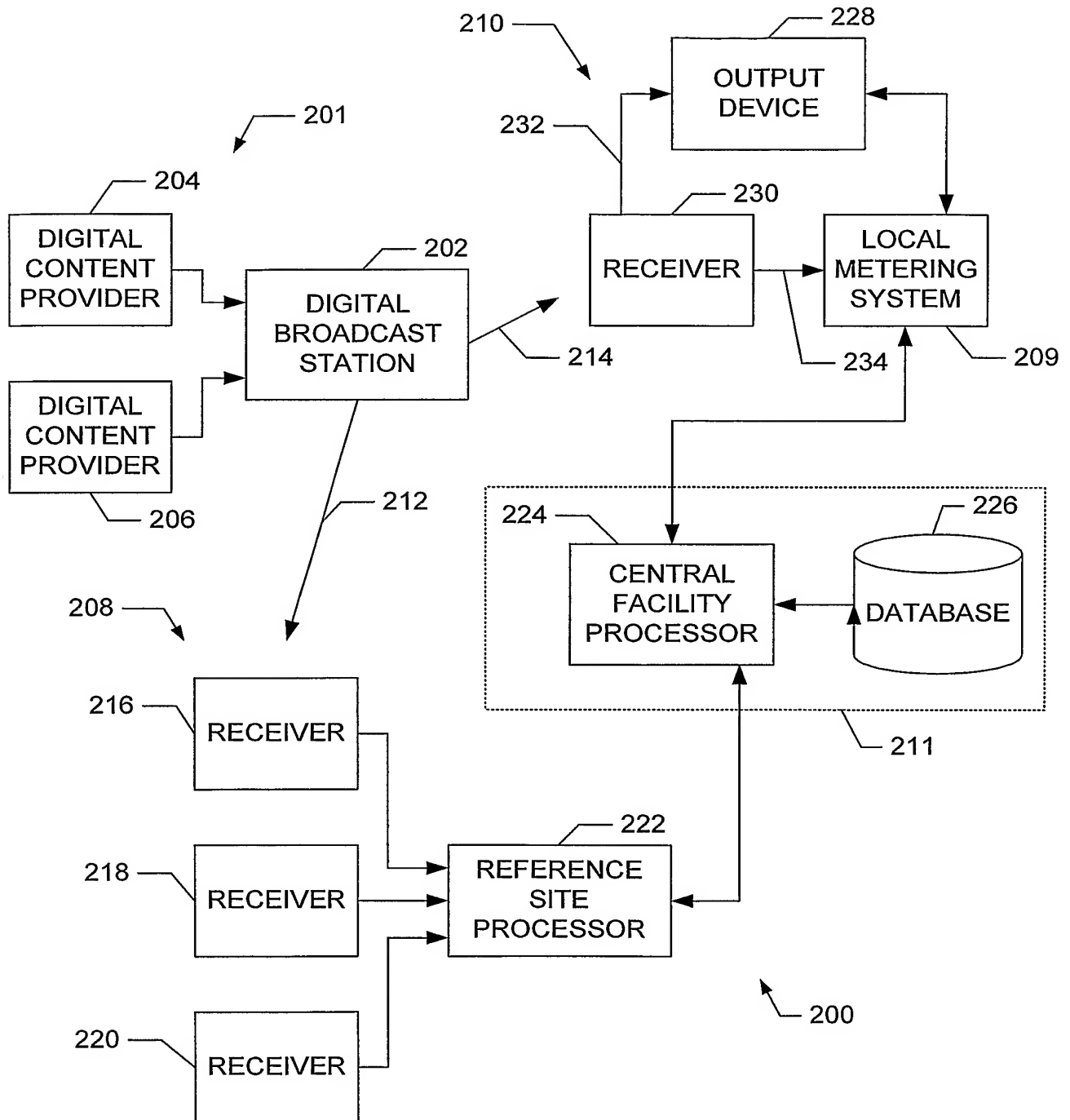


FIG. 2

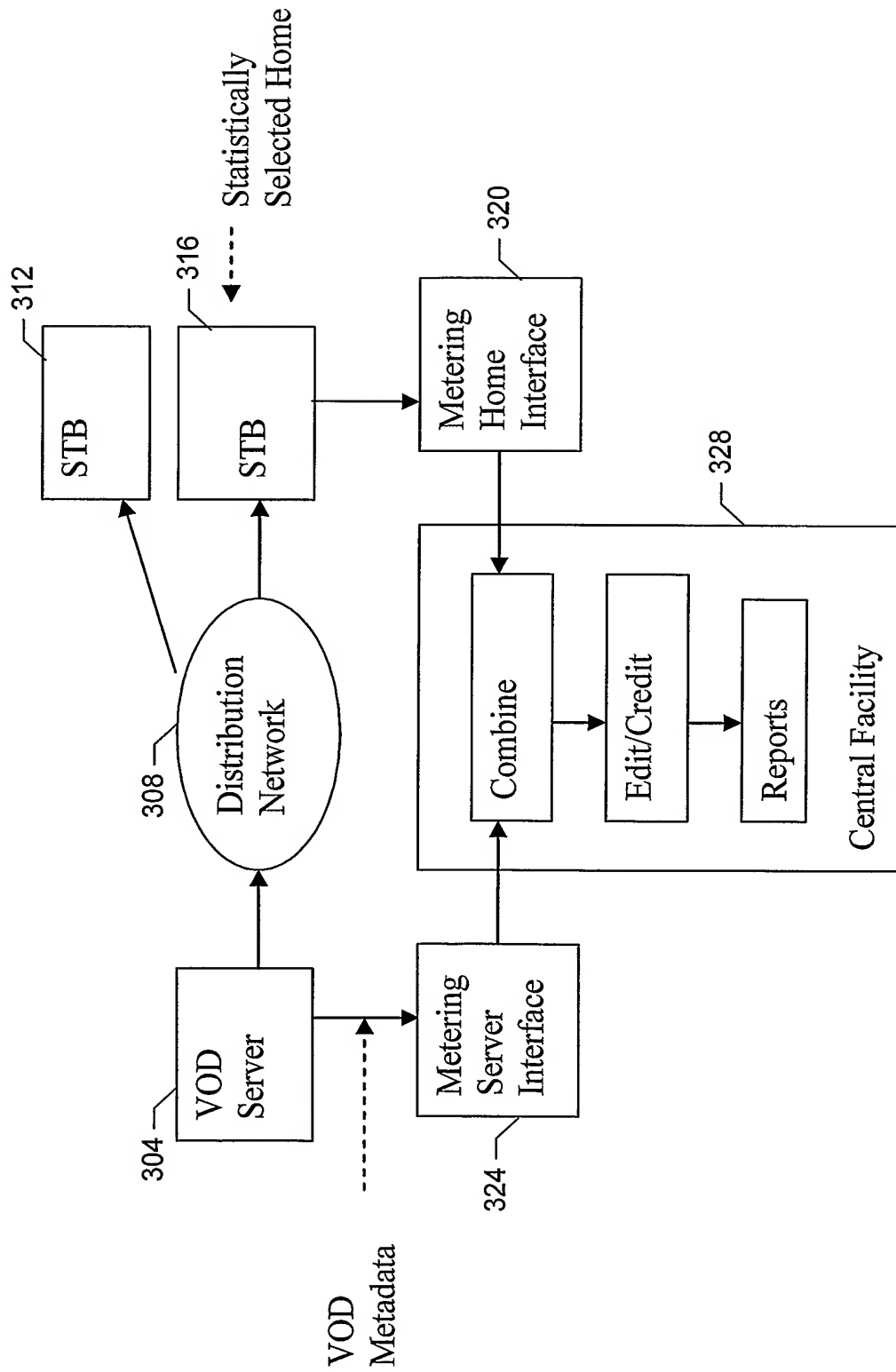


FIG. 3

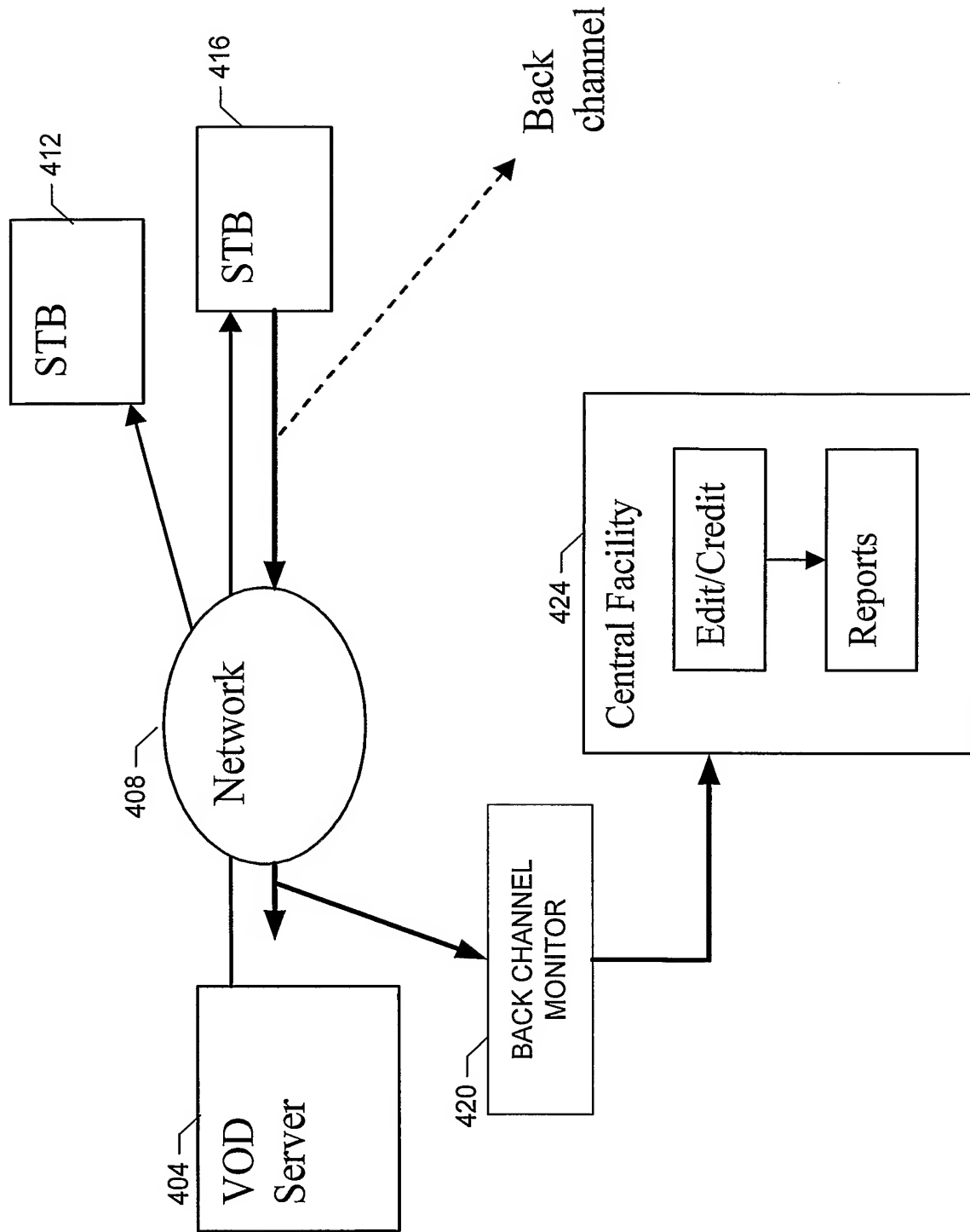


FIG. 4

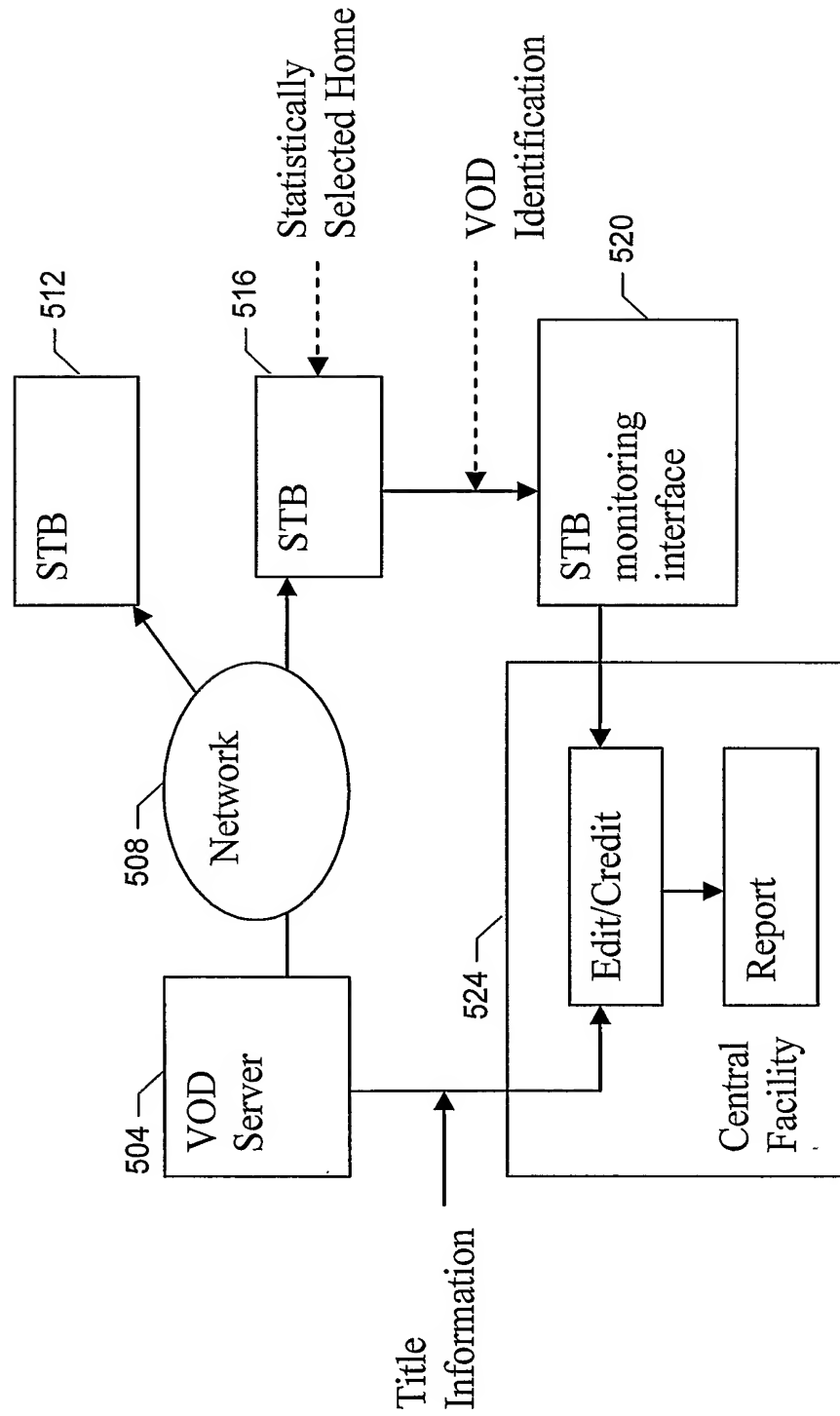


FIG. 5

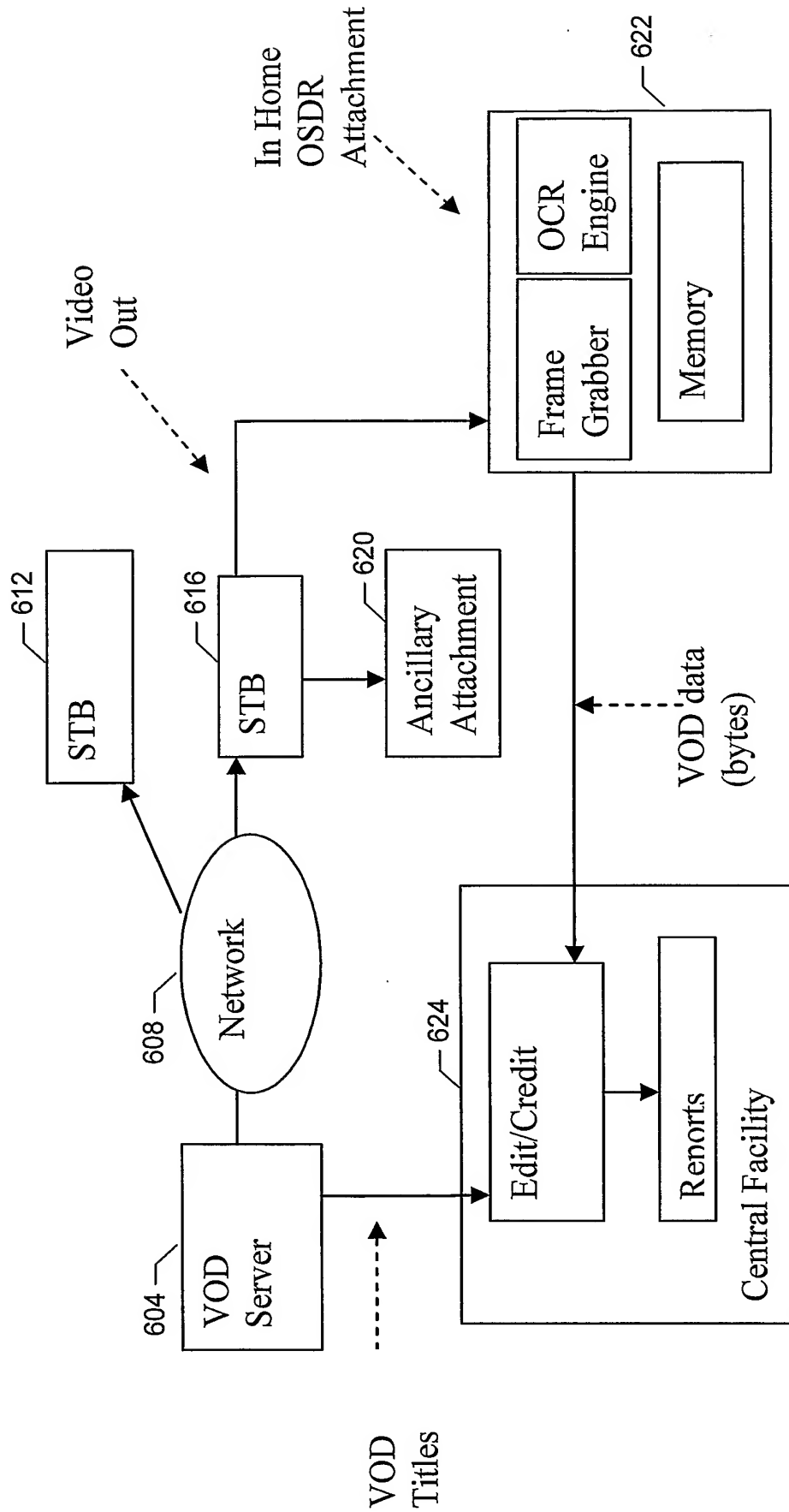


FIG. 6

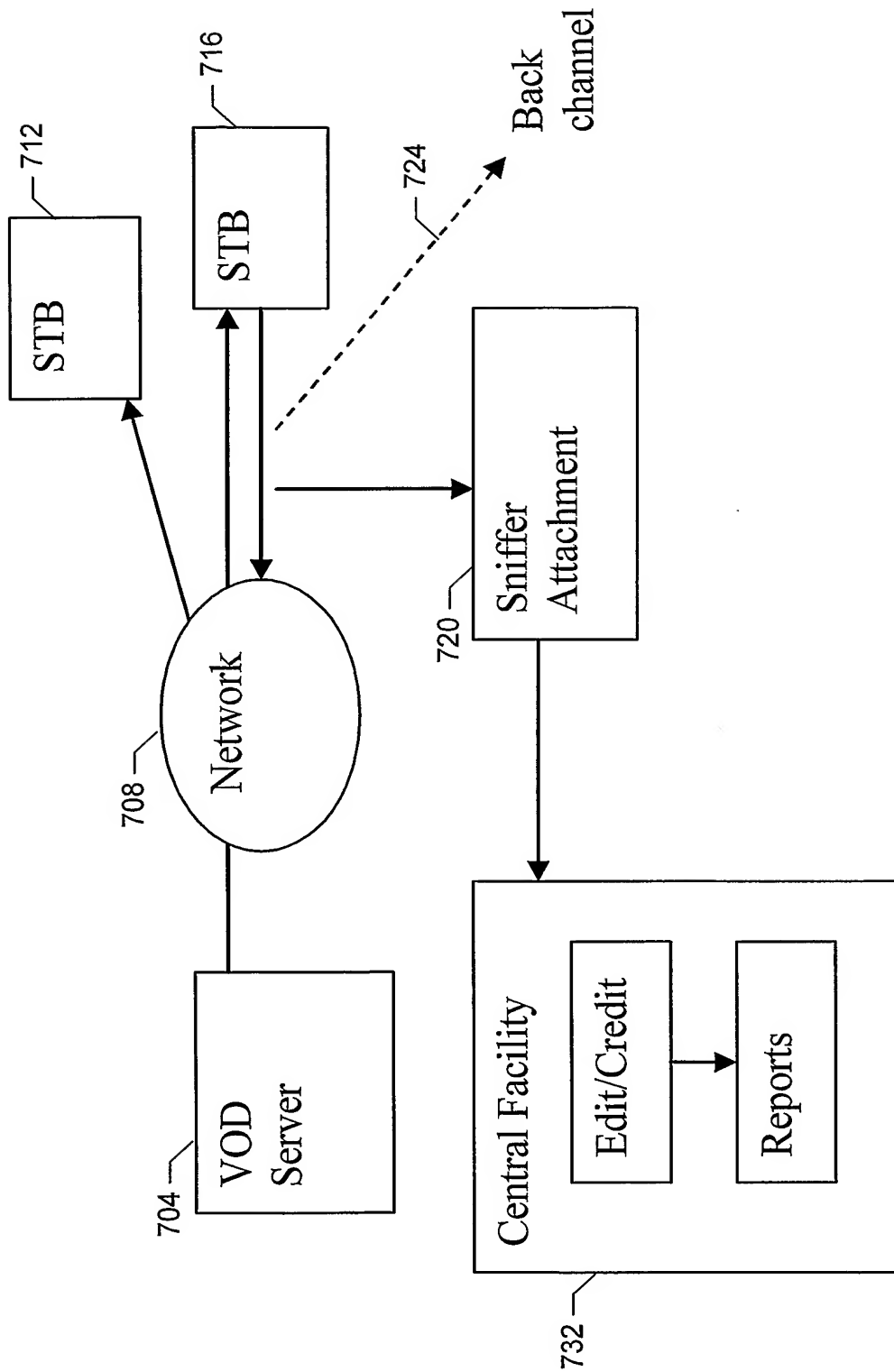


FIG. 7

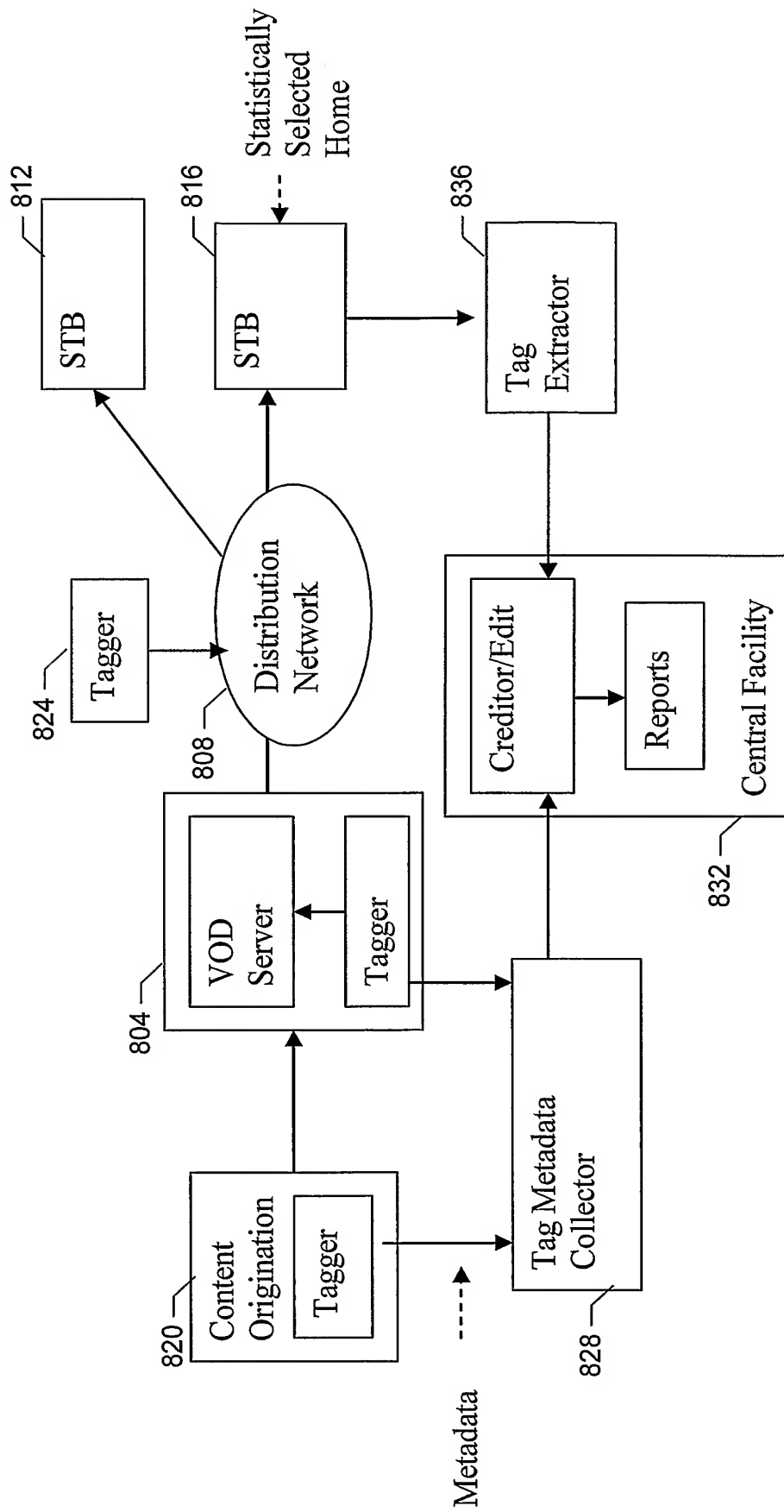


FIG. 8

Server site techniques: Metering data collection from VOD server only

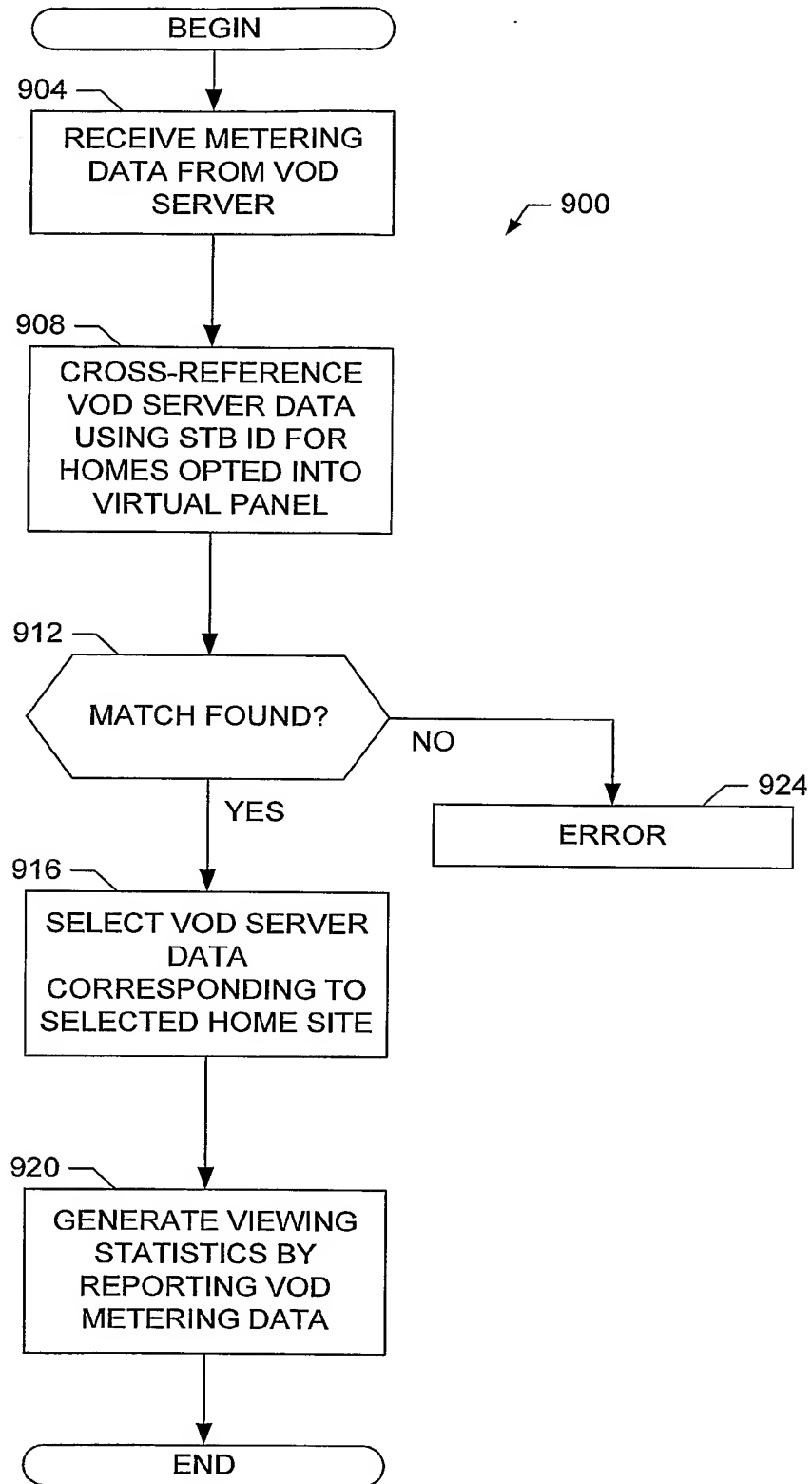


FIG. 9

Server site techniques: Backchannel data collection at server site

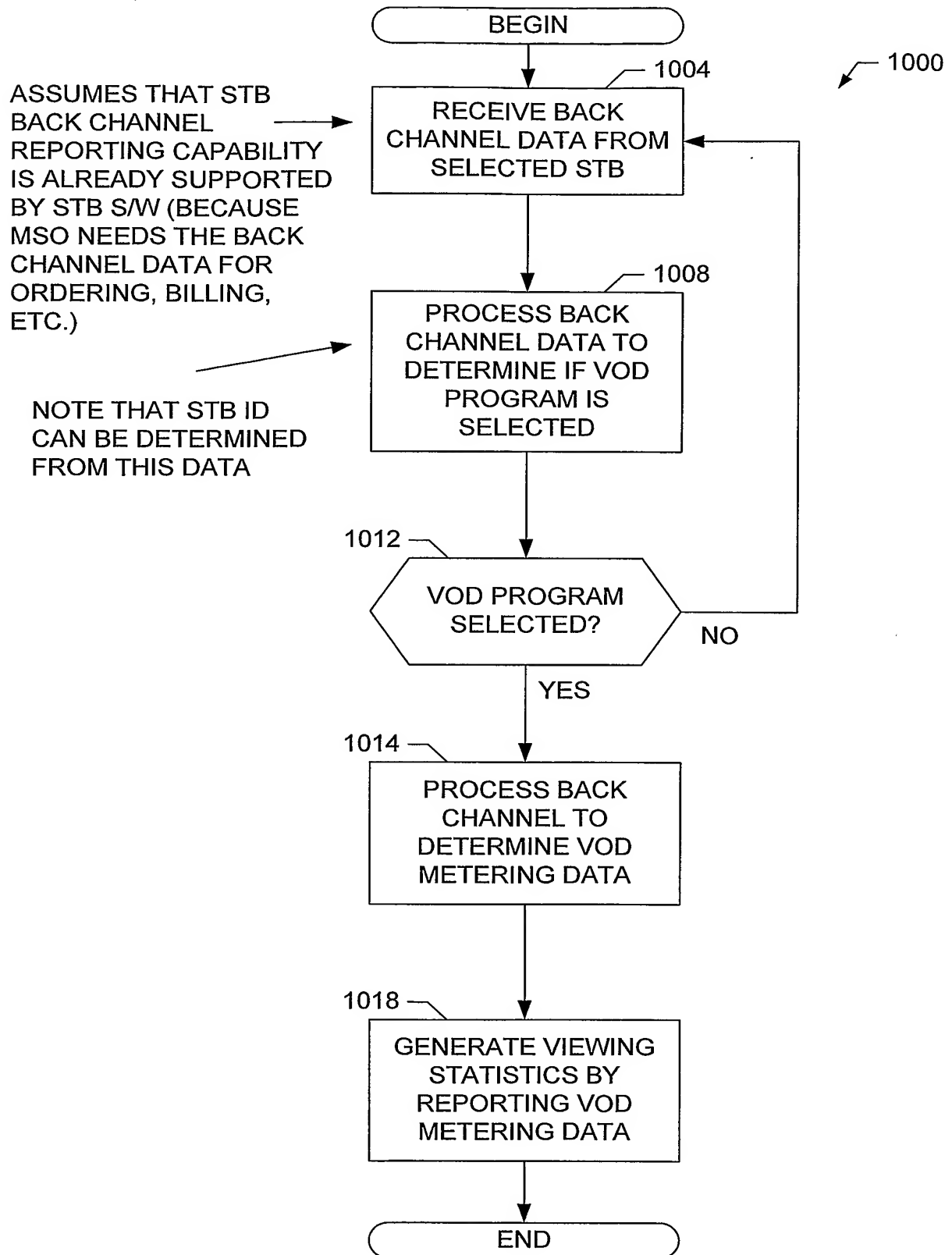


FIG. 10

Home site techniques: Data collection from STB monitoring (non-invasive via software meter)

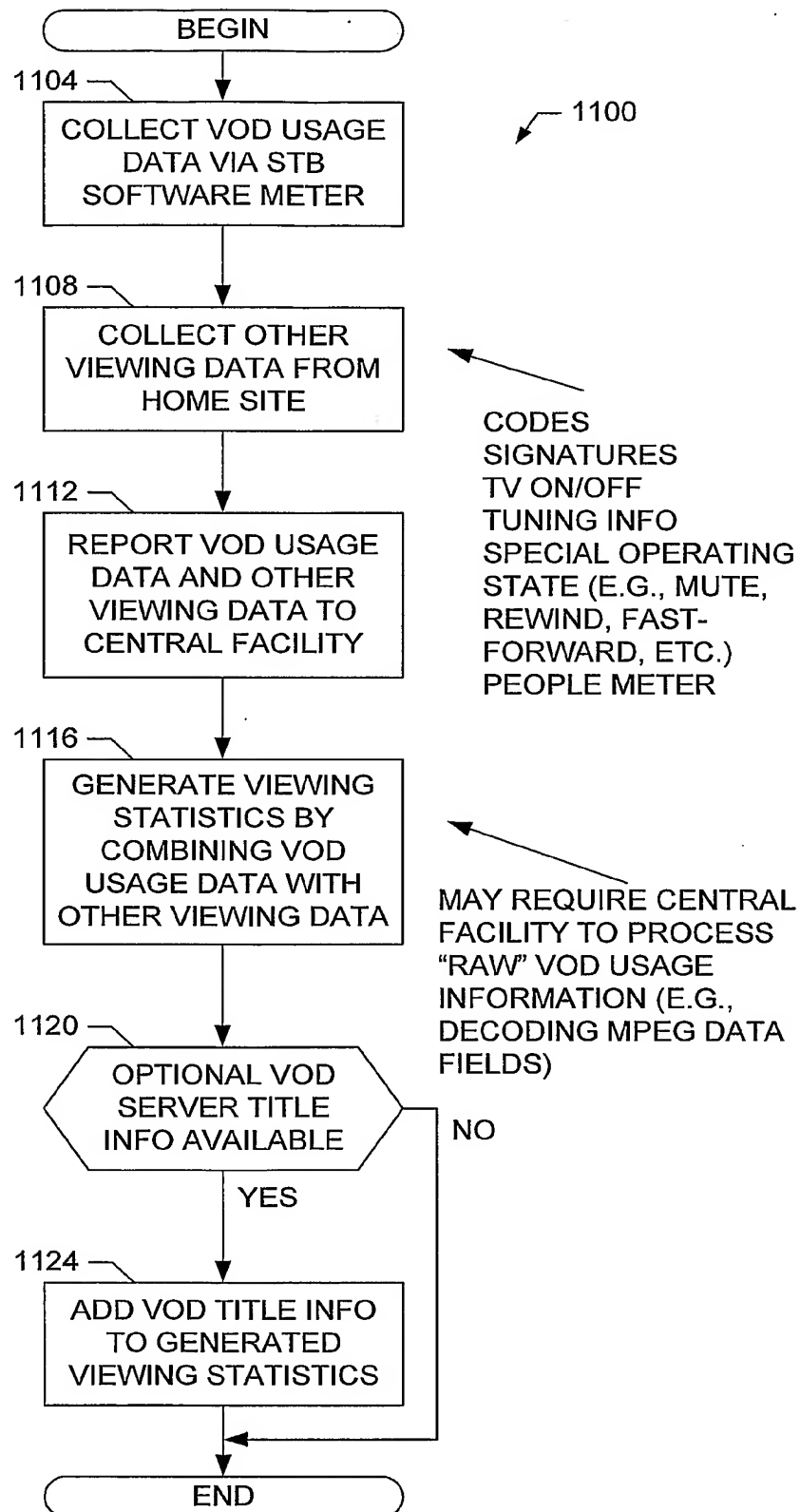
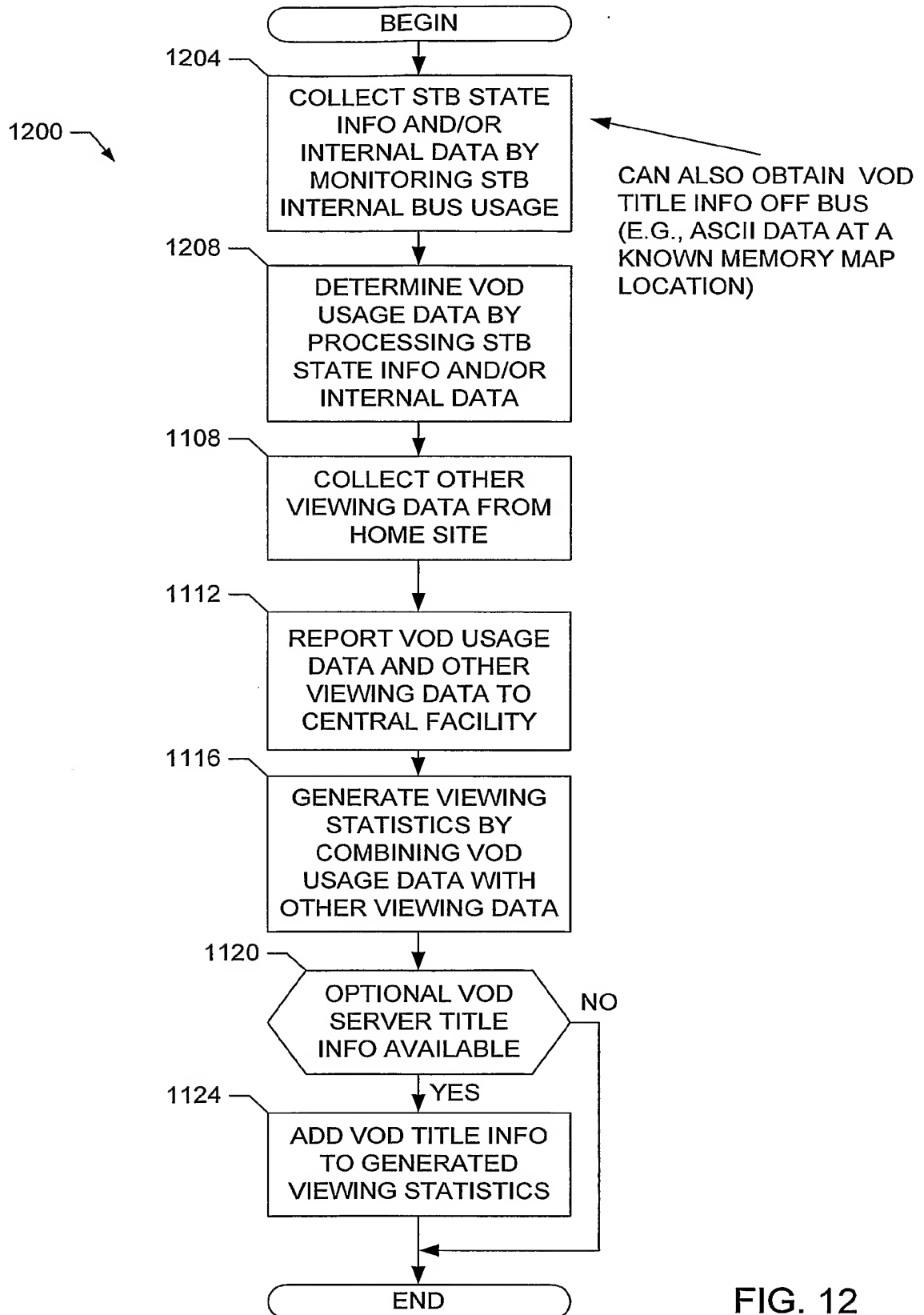


FIG. 11

Home site techniques: Data collection from STB monitoring (invasive via bus sniffing)



Home site techniques: STB data reporting directly to monitoring central facility

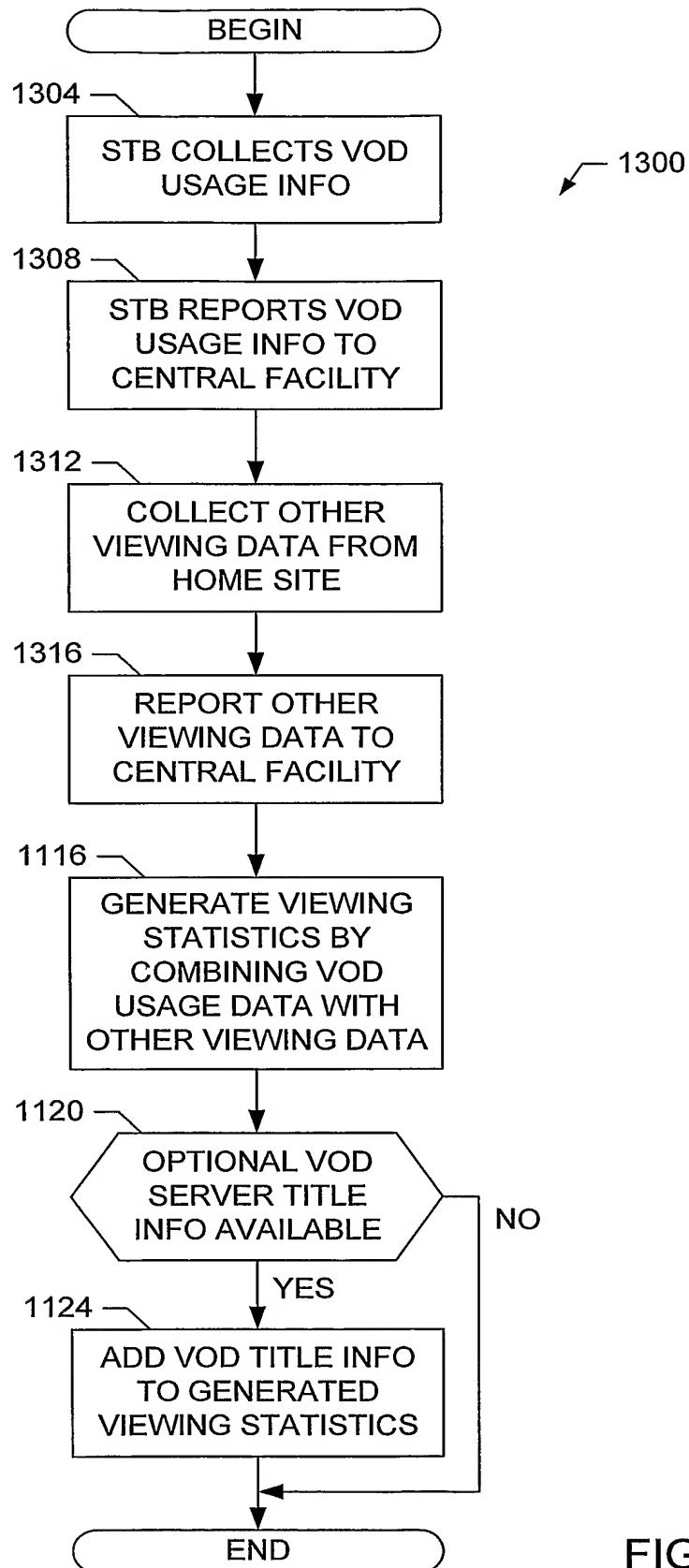


FIG. 13

Home site techniques: Data collection with OSDR techniques

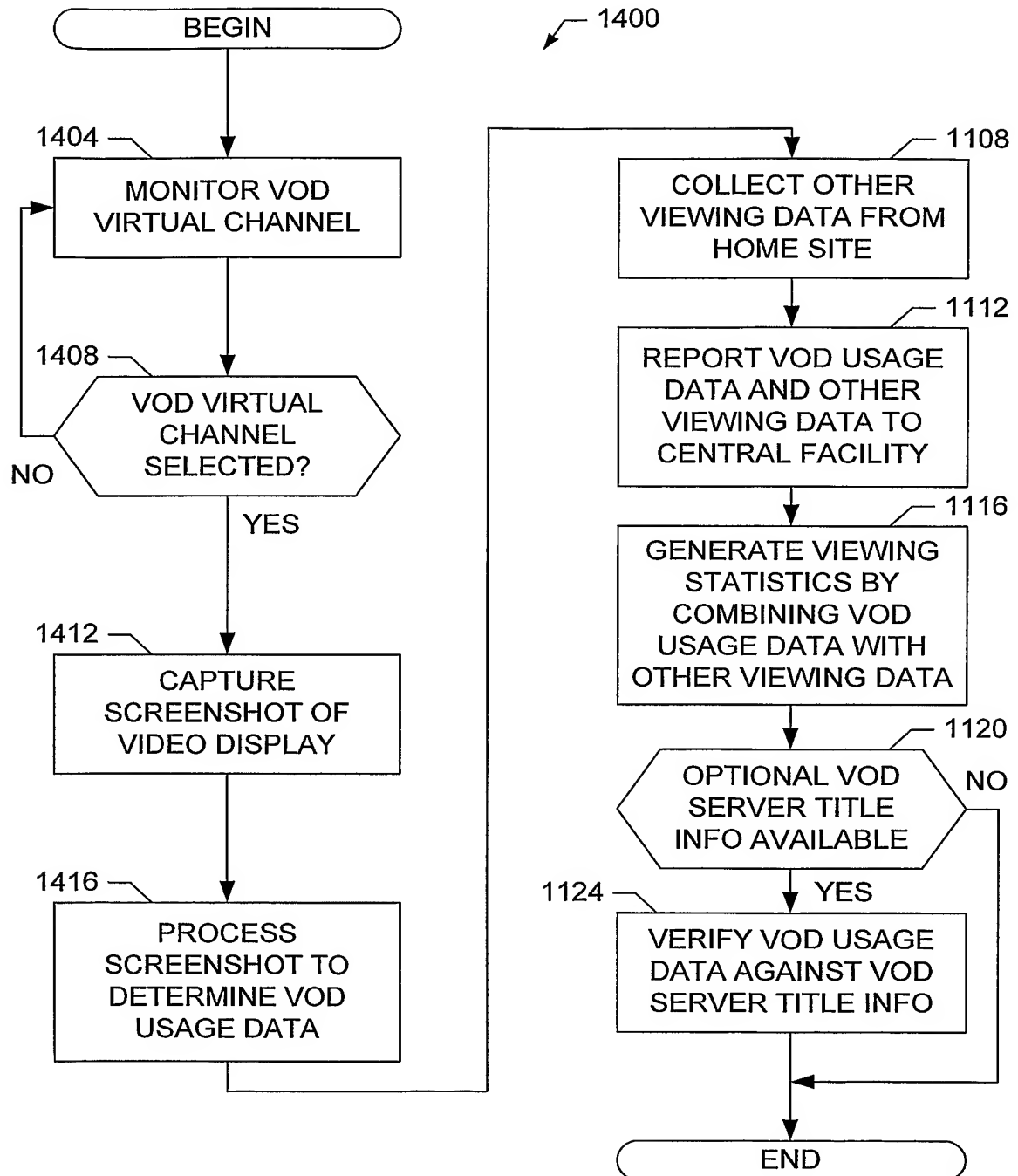


FIG. 14

Home site techniques: Data sniffing approaches (broadcast data signal and backchannel signal)

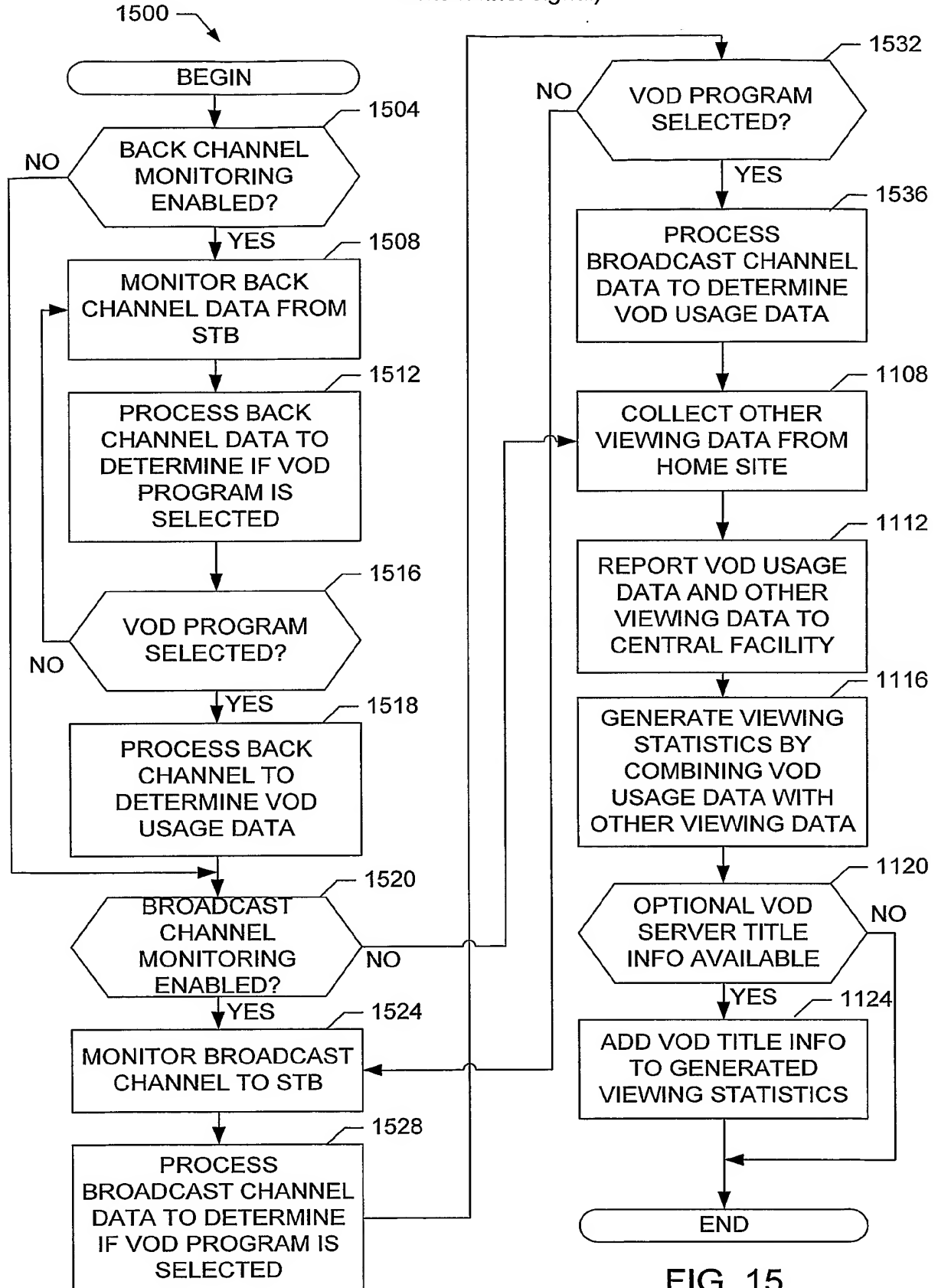


FIG. 15

Hybrid techniques: Data collection from VOD server correlated with data collected from STB

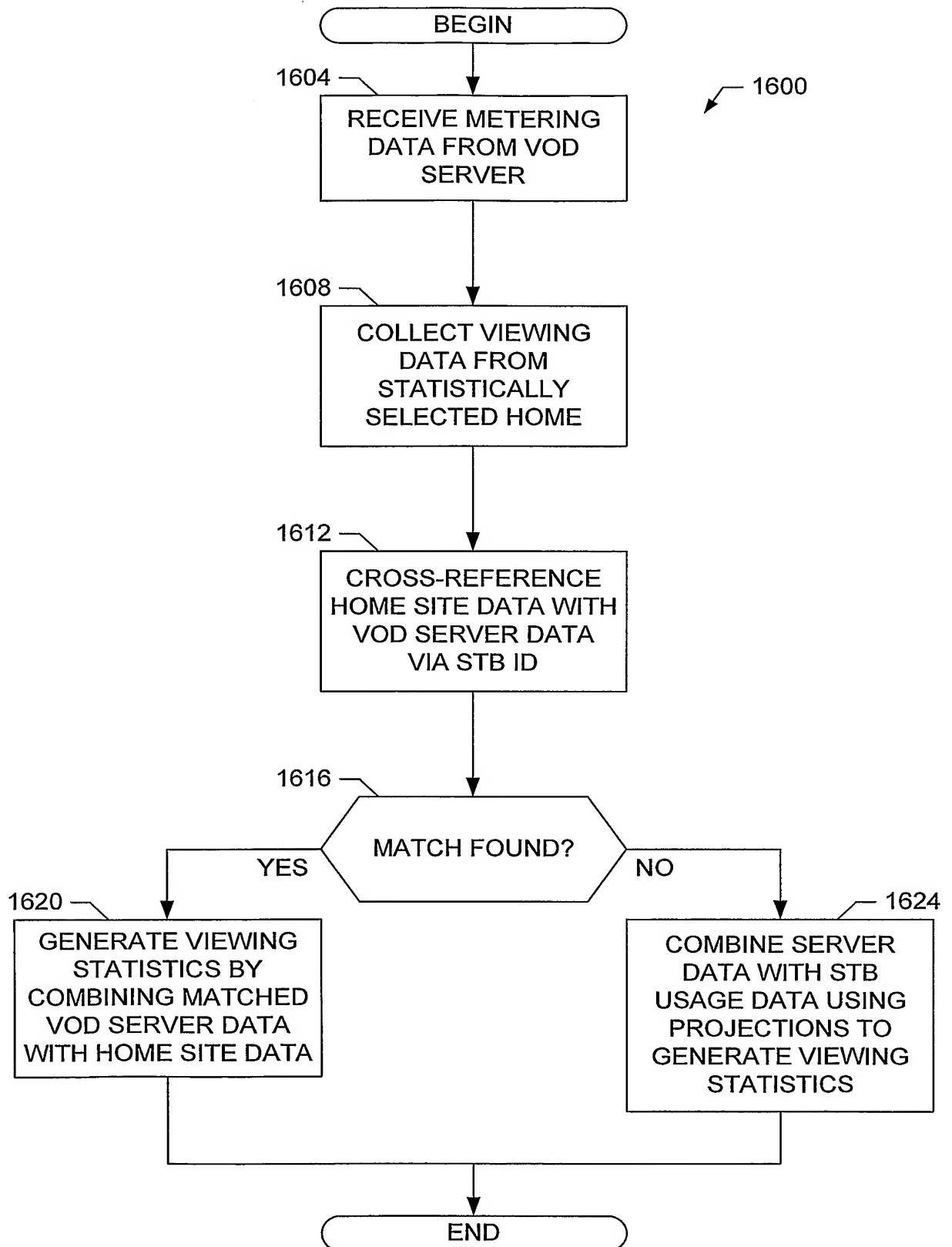


FIG. 16

Hybrid techniques: Metadata use in the headend and upstream

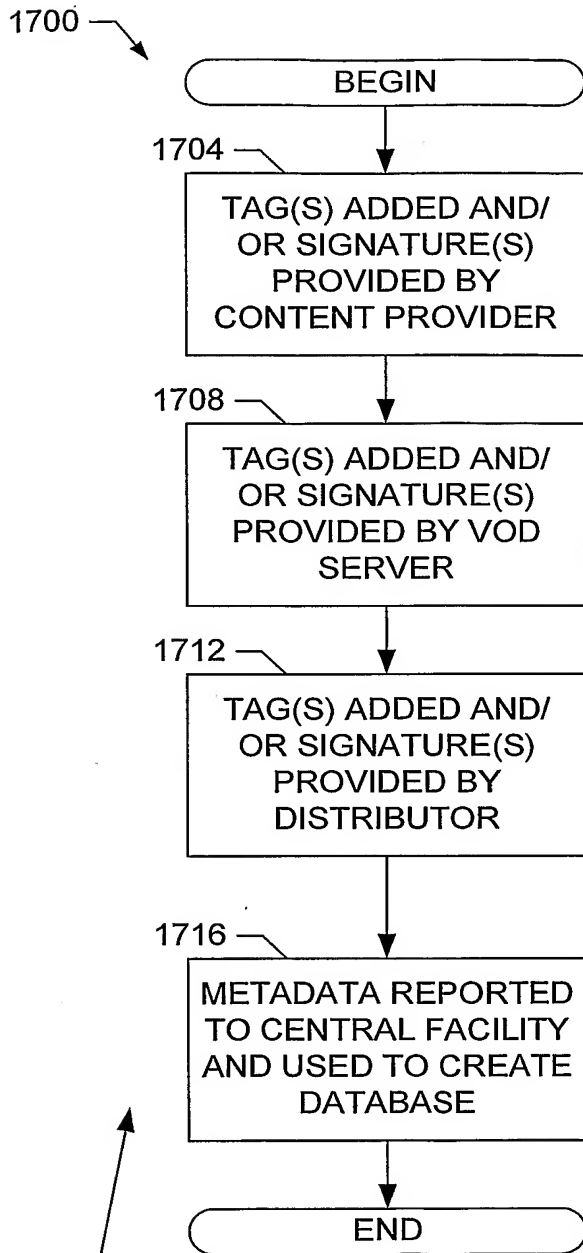


FIG. 17A

METADATA MAY INCLUDE:
 AUDIO CODES
 VIDEO CODES
 AUDIO SIGNATURES
 VIDEO SIGNATURES
 DIGITAL CONTENT IDS
 PRIVATE CONTENT IDS

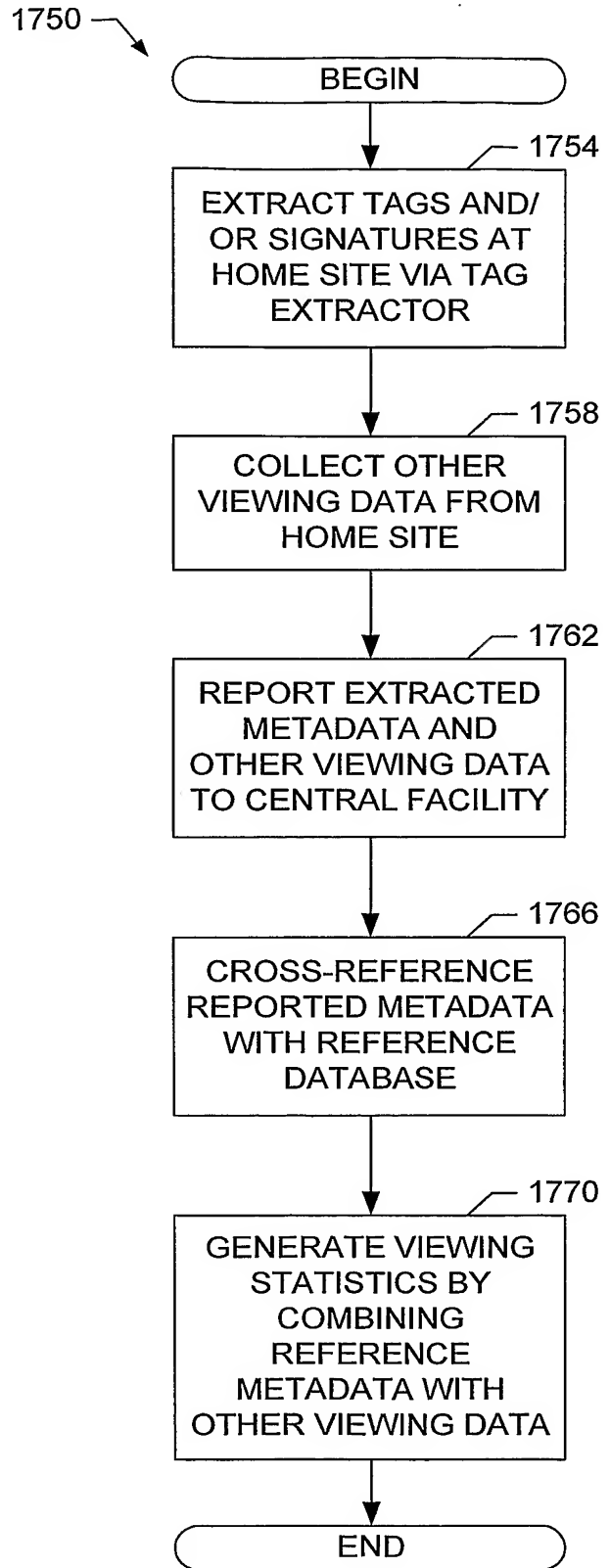


FIG. 17B

Hybrid techniques: Combine data collection from STB with OSDR monitoring

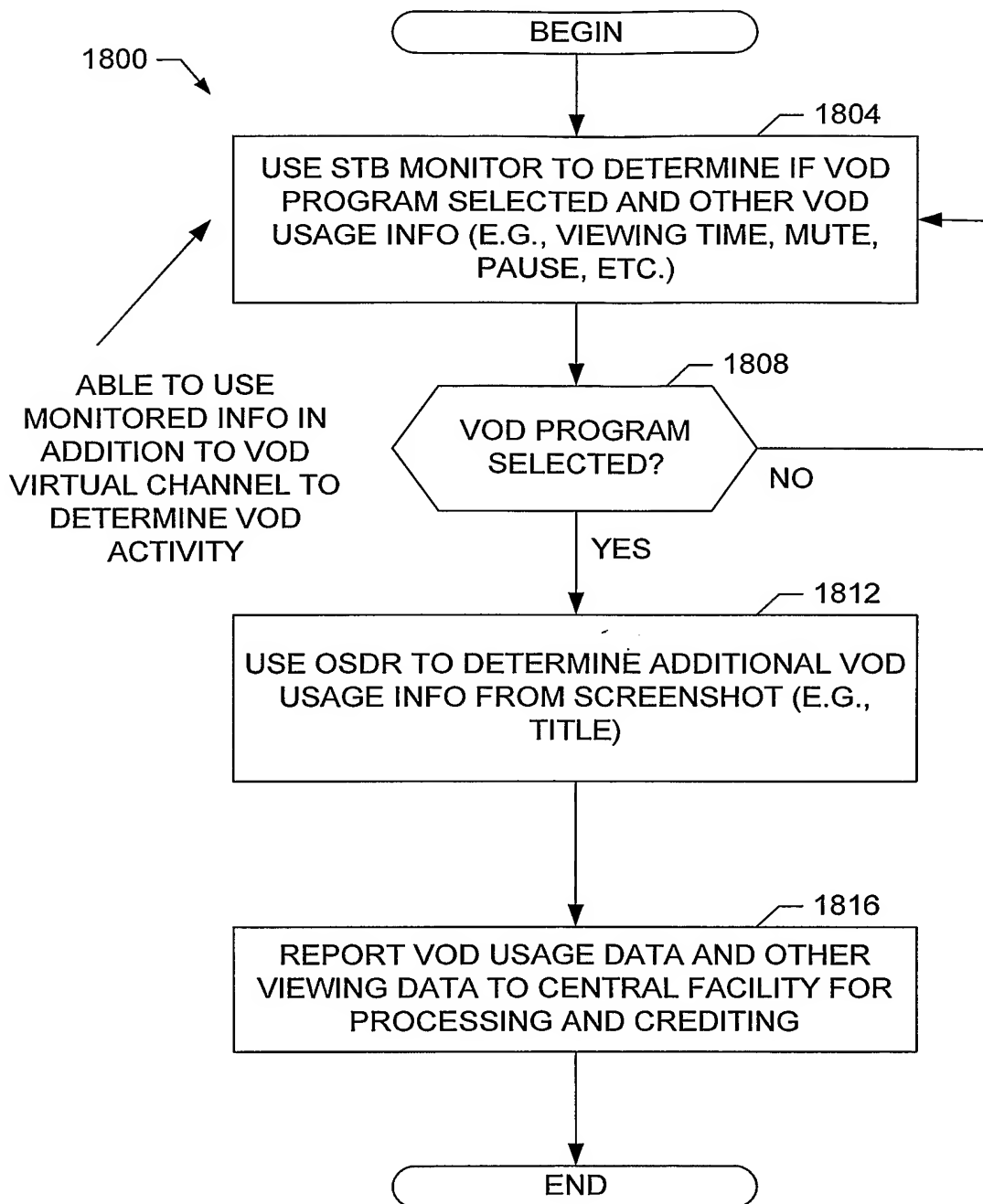


FIG. 18

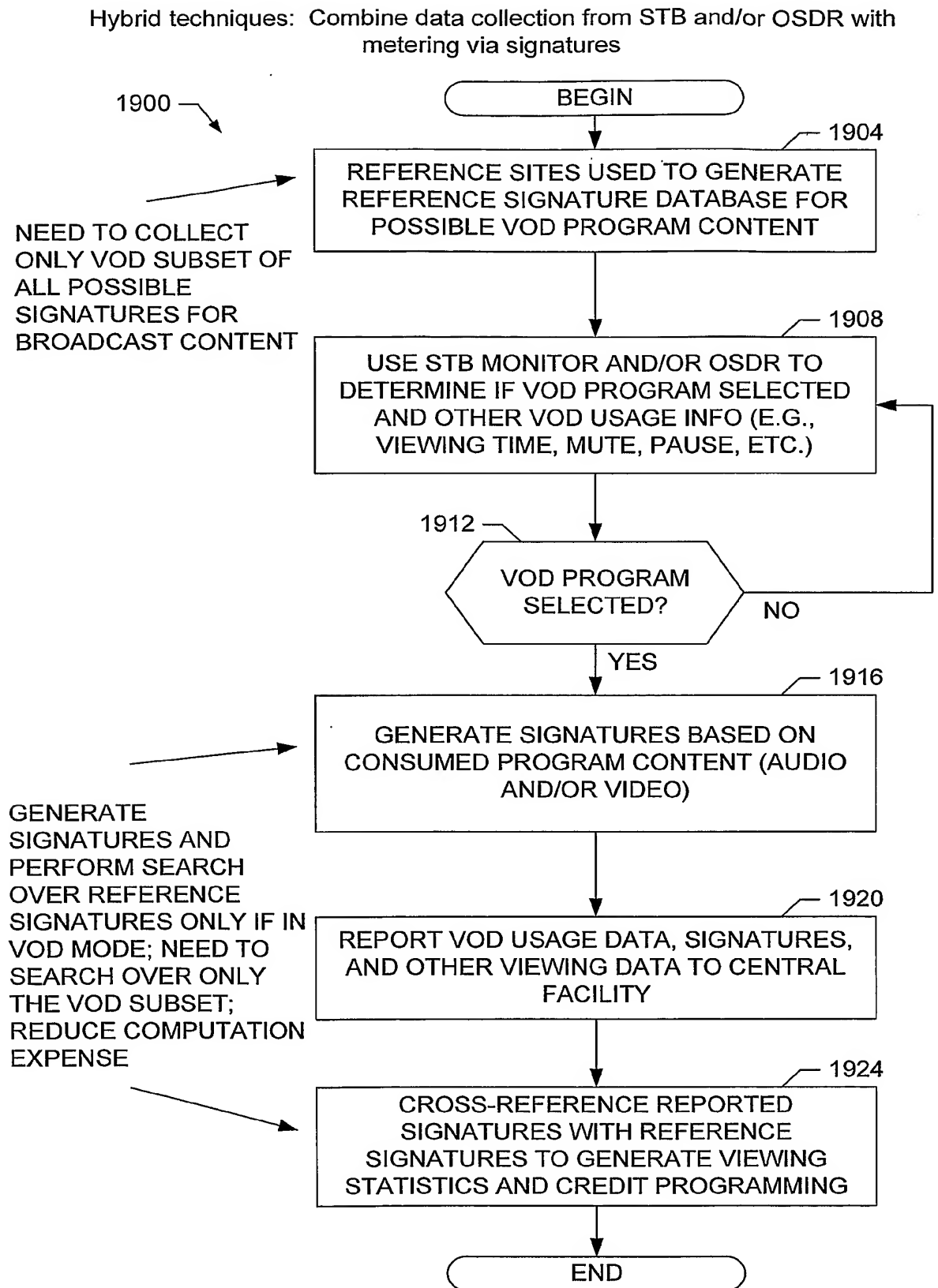
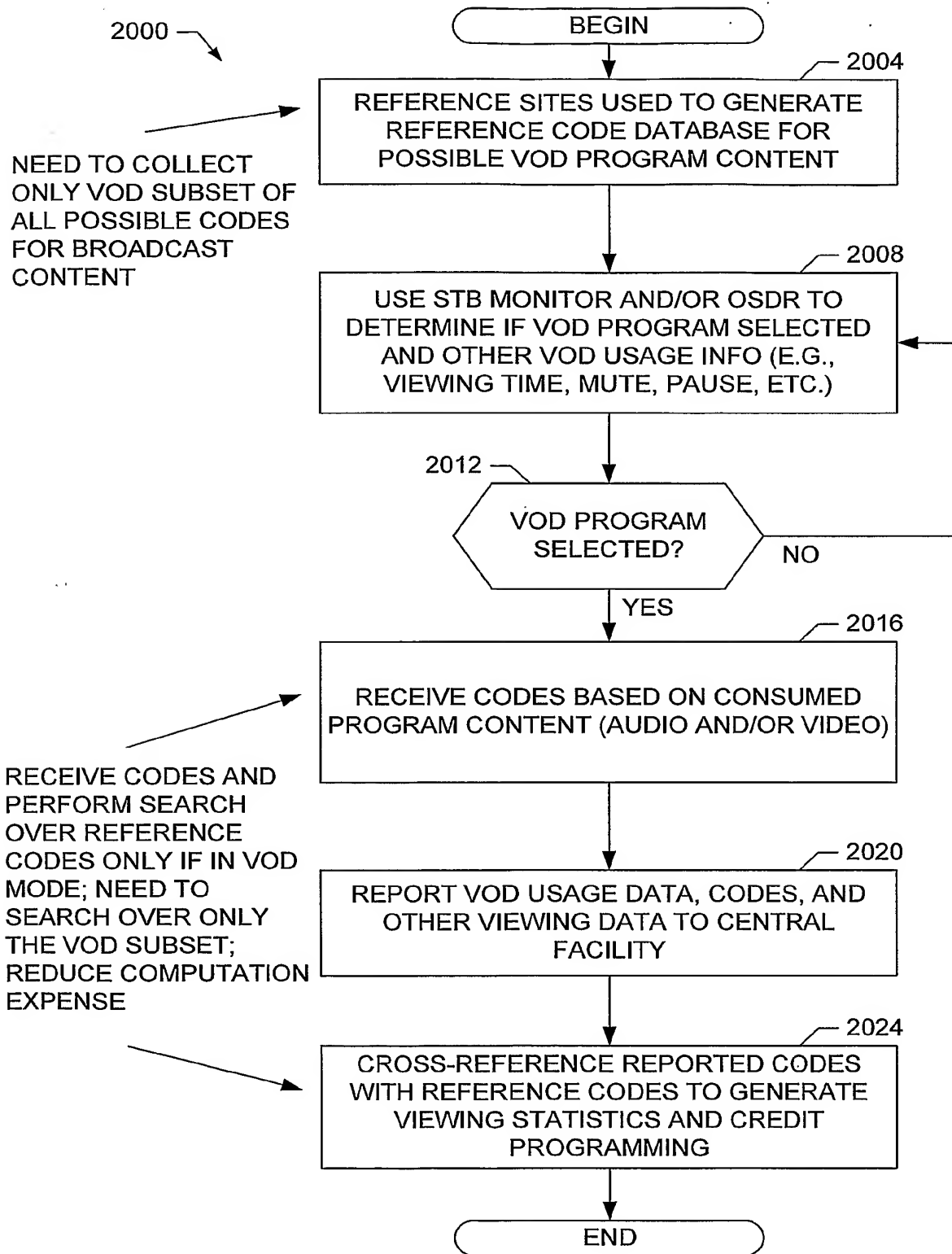


FIG. 19

Hybrid techniques: Combine data collection from STB and/or OSDR with metering via codes



Hybrid techniques: Metadata use combined with VOD usage detection

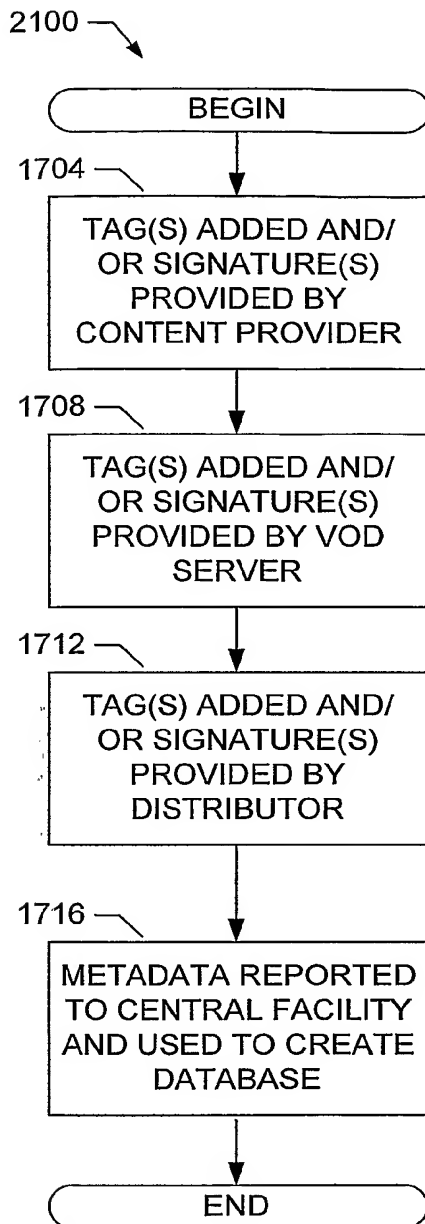


FIG. 21A

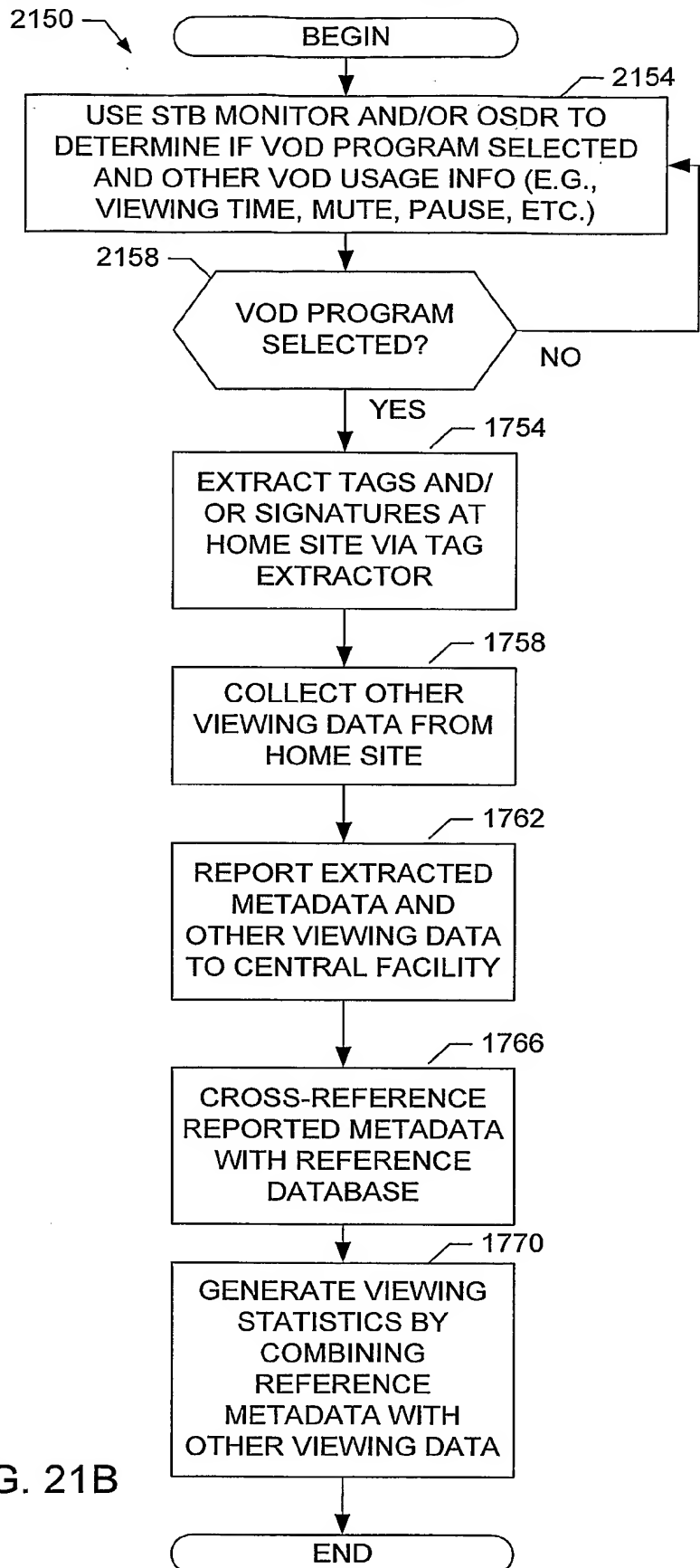


FIG. 21B

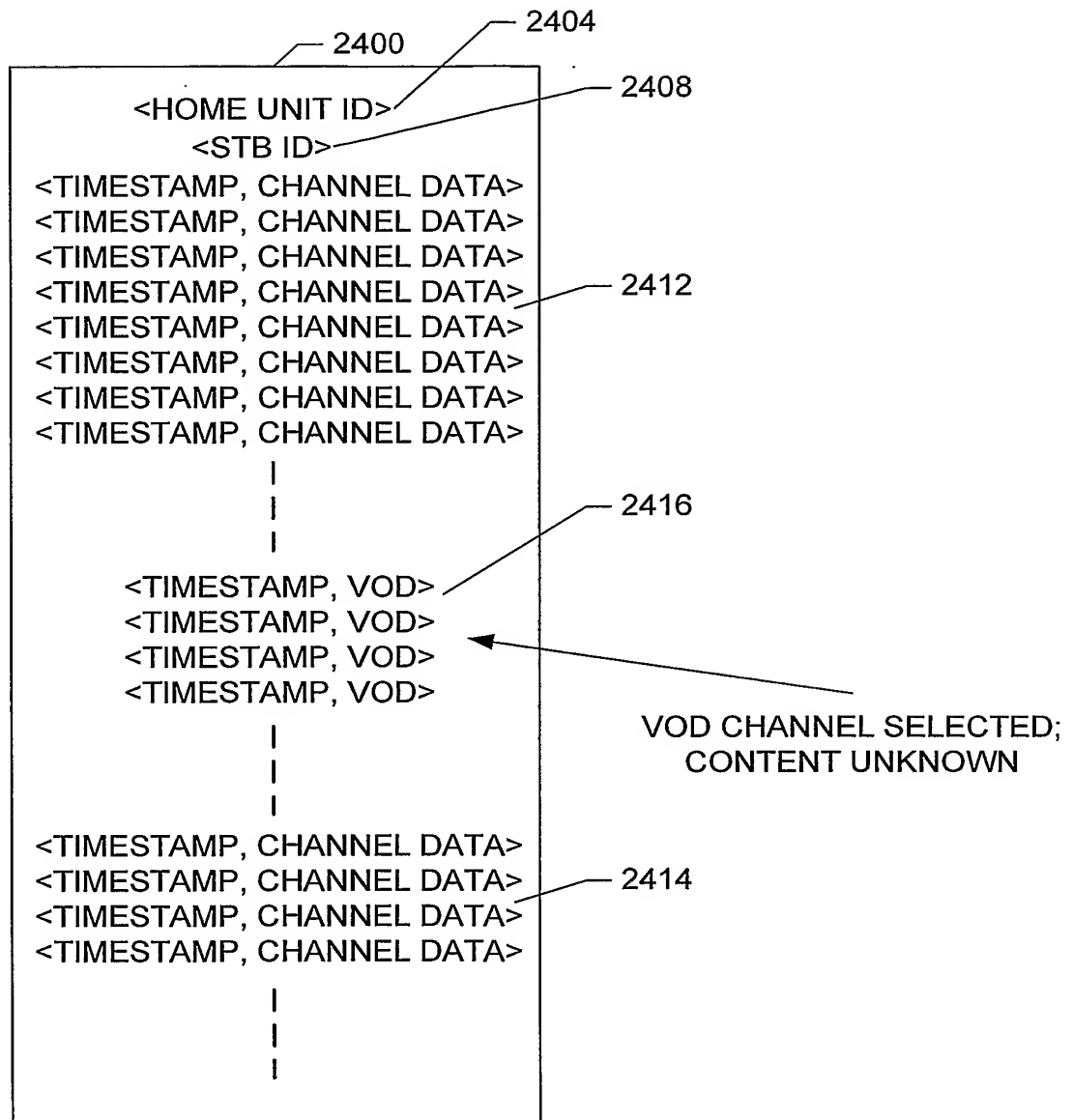


FIG. 22

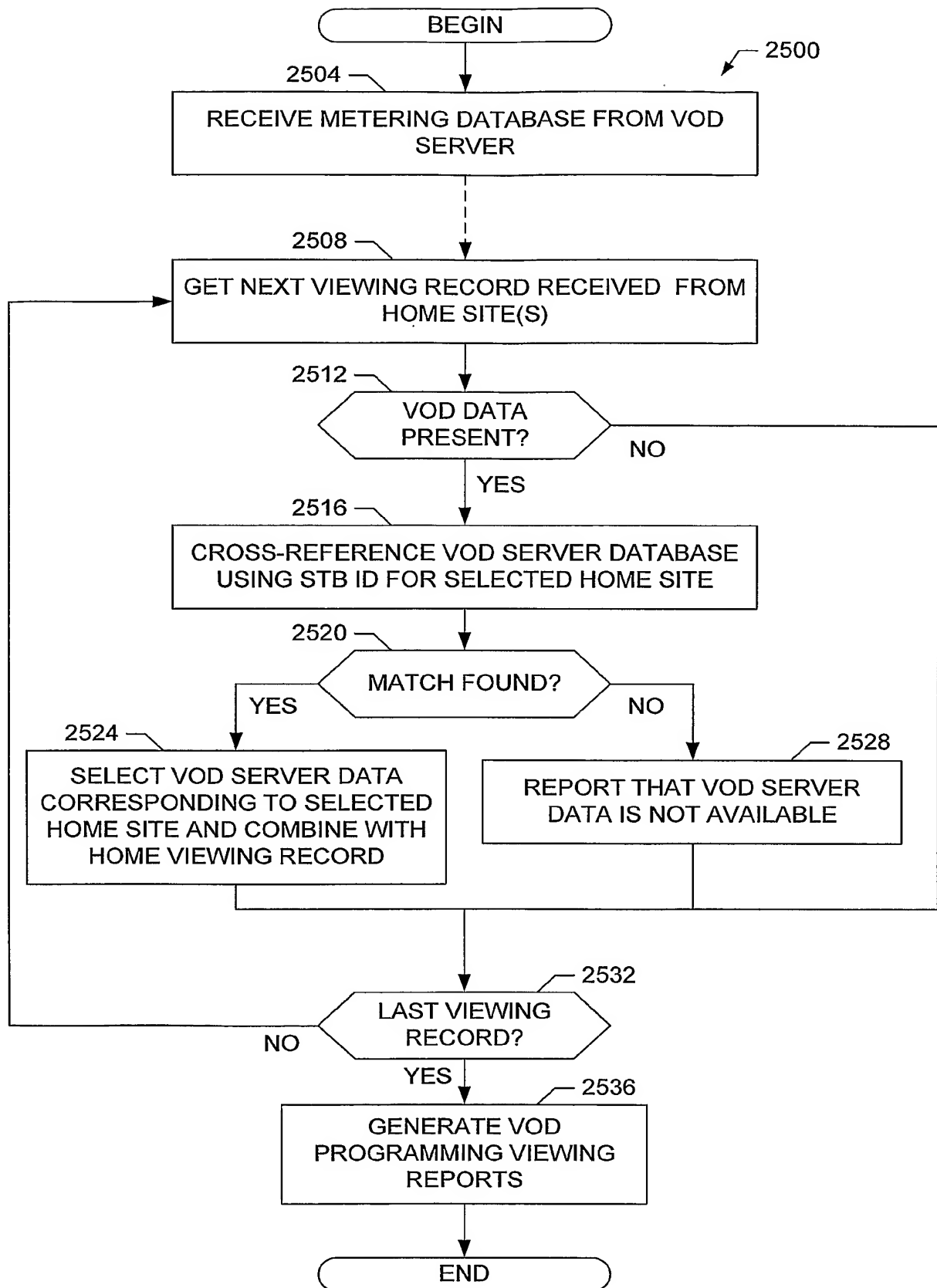


FIG. 23

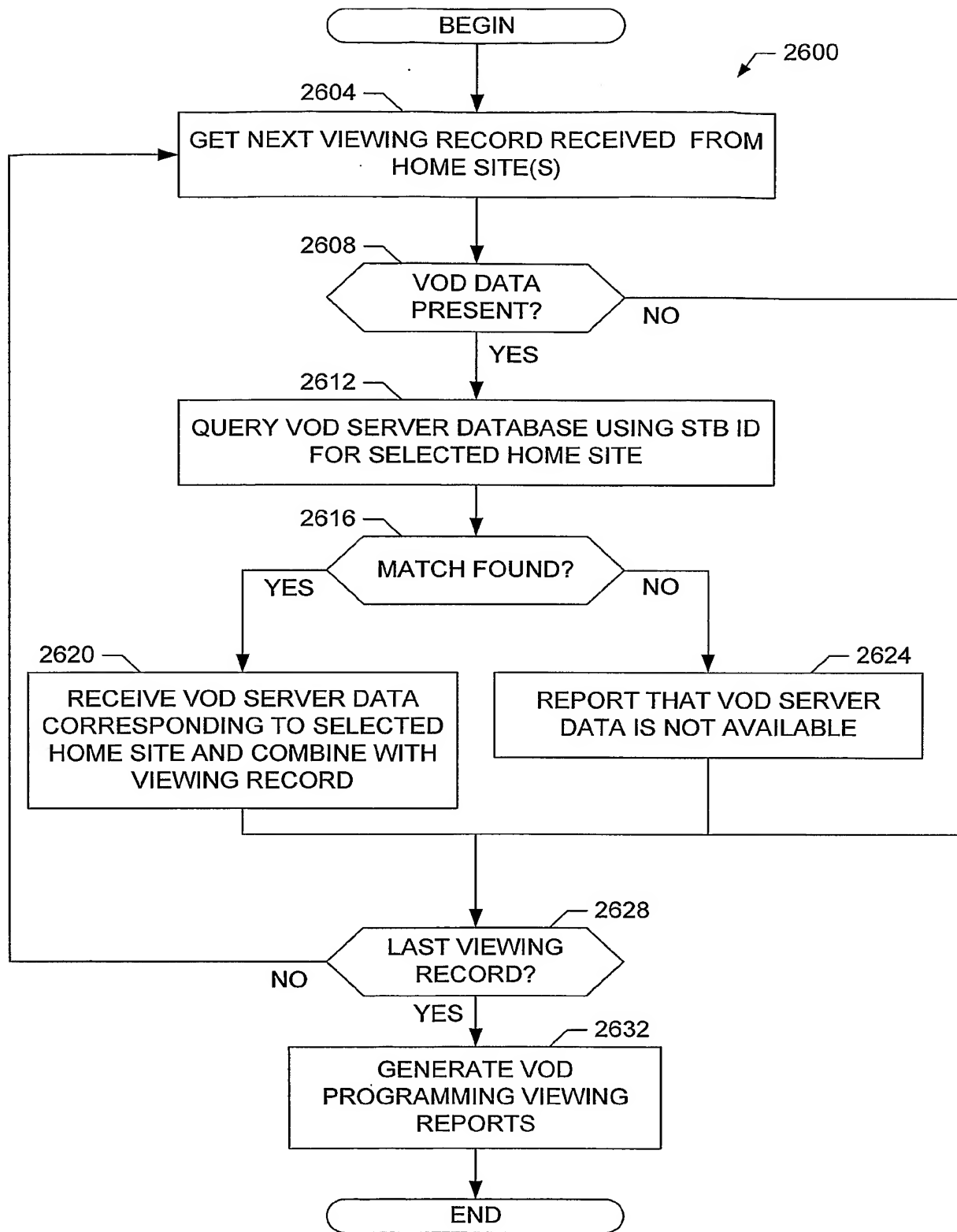


FIG. 24

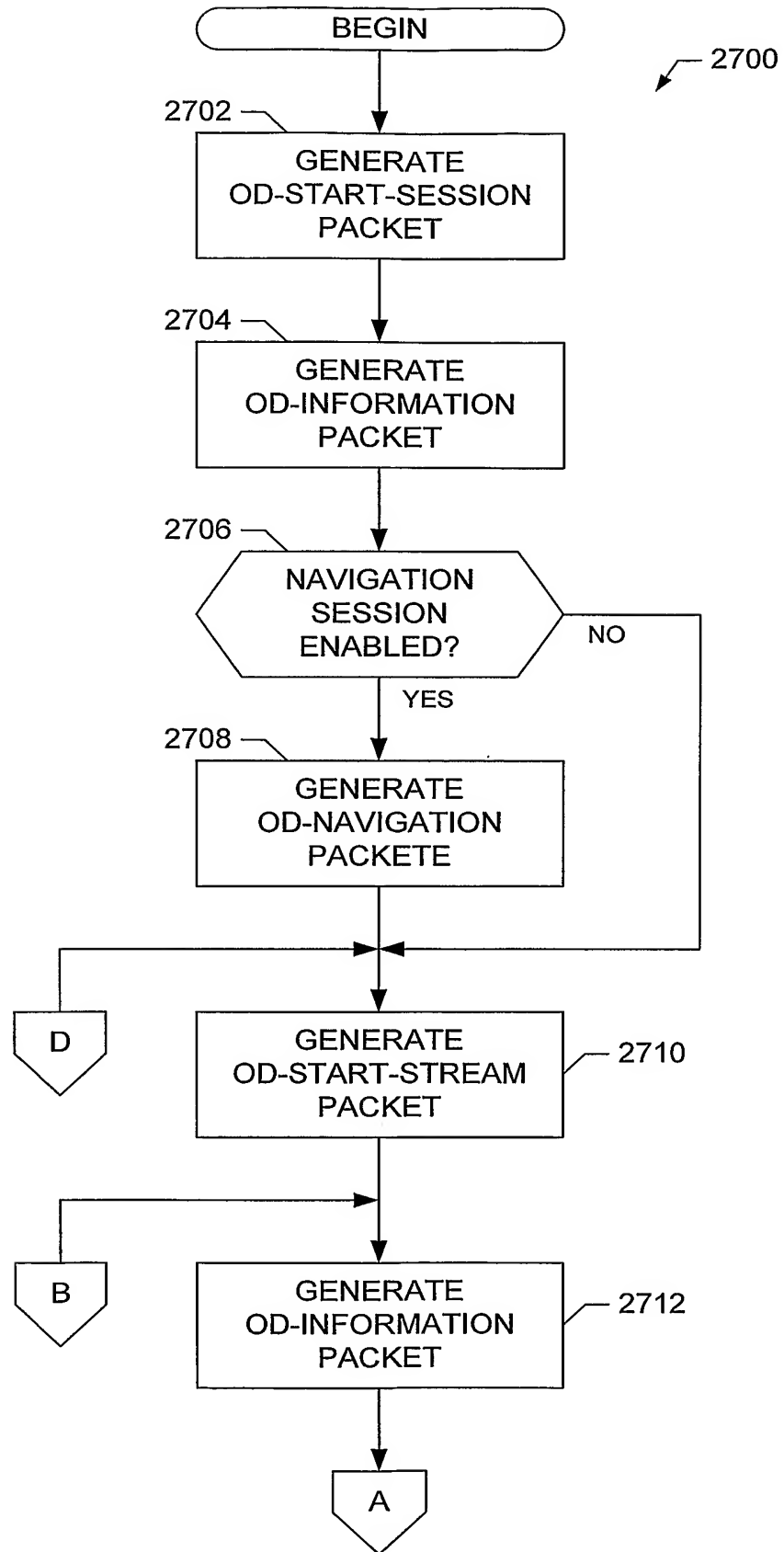


FIG. 25A

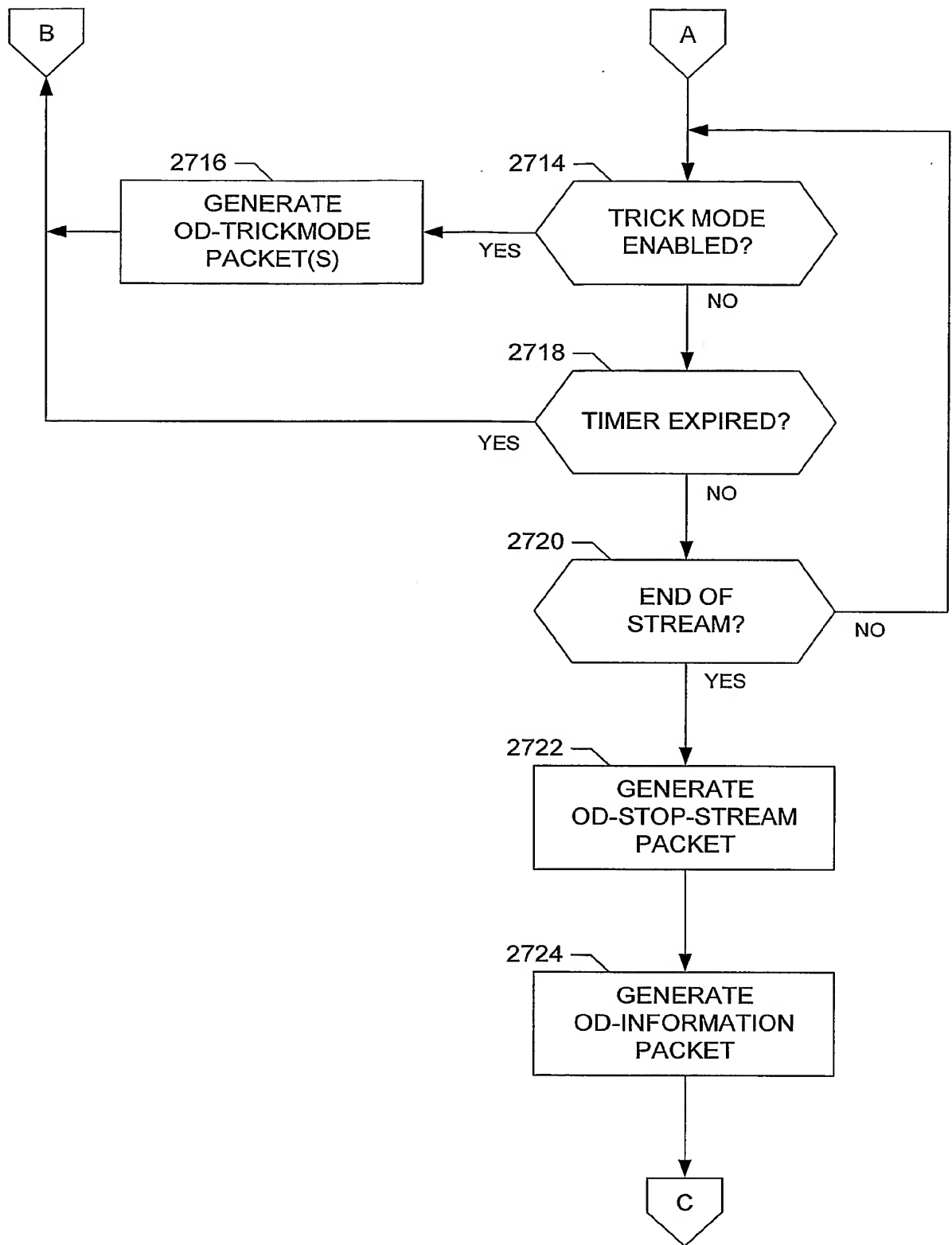


FIG. 25B

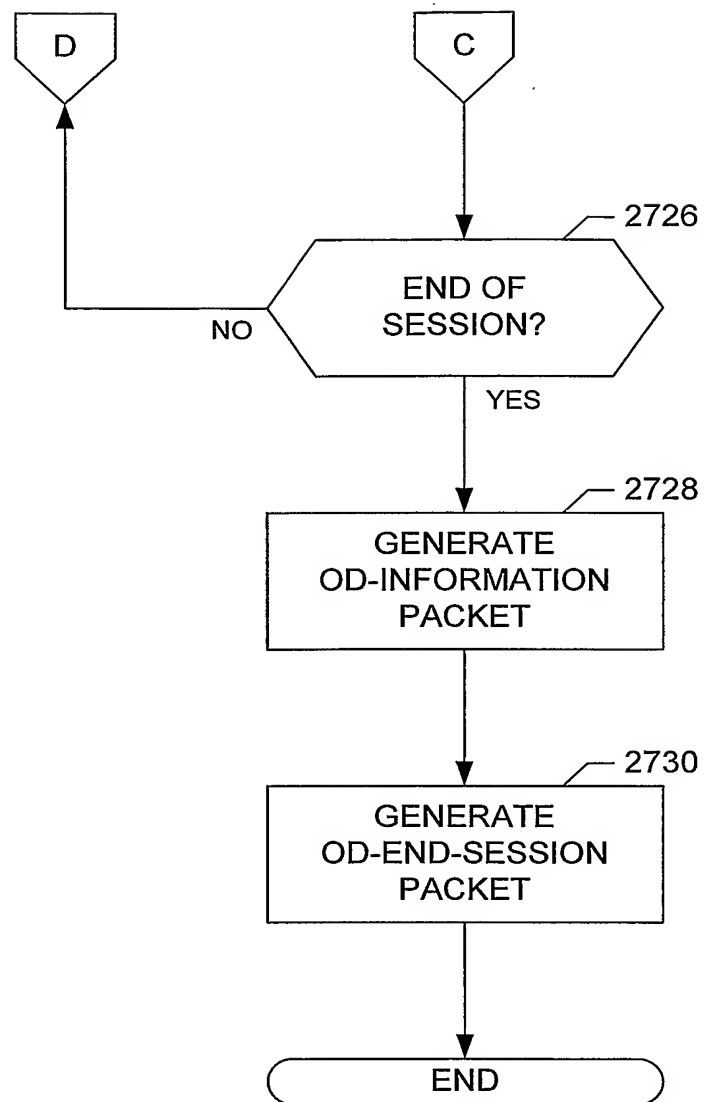


FIG. 25C

OD-START-SESSION:

Field	Description	Format	Example
Set top box ID	A unique identifier for the set top box that initiated the On-Demand session. The recommended set top ID is the MAC address for the device.	Variable length string	01:02:03:04:05:06
Session ID	A unique identifier established between the On-Demand system and the set top box.	Variable-length string	0123456789
Timestamp	The time/date when On-Demand session	MM/DD/YYYY HH:MM: SS.MMM	01/23/2003 20:55:20.123

FIG. 26A

OD-END-SESSION:

Field	Description	Format	Example
Set top box ID	A unique identifier for the set top box that terminated the On-Demand session. The recommended set top ID is the MAC address for the device.	Variable length string	01:02:03:04:05:06
Session ID	A unique identifier established between the On-Demand system and the set top box.	Variable-length string	0123456789
Timestamp	The time/date when On-Demand session ended in GMT.	MM/DD/YYYY HH:MM: SS.MMM	01/23/2003 20:55:20.123

FIG. 26B

OD-INFORMATION:

Field	Description	Format	Example
Set top box ID	A unique identifier for the set top box that terminated the On-Demand session. The recommended set top ID is the MAC address for the device.	Variable length string	01:02:03:04:05:06
Session ID	A unique identifier established between the On-Demand system and the set top box.	Variable-length string	0123456789
Timestamp	The time/date when OD-Information data was created in GMT.	MM/DD/YYYY HH:MM: SS.MMM	01/23/2003 20:55:20.123
Bitrate	The overall bit rate for the session	Unsigned integer	2500000
Connection Type	The type of connection between the On-Demand system and the set top box.	1 – UDP 2 – TCP 99 – Other	2
Stream errors	The number of stream errors that have occurred since the start of the current session.	Unsigned Integer	1
Communication errors	The number of communication errors that have occurred since the start of the current session.	Unsigned Integer	2
System errors	The number of system errors that have occurred since the start of the current session.	Unsigned Integer	3
Channel number	The channel number (major and minor) that the On-Demand content is being sent on.	Unsigned Integer	525-1

FIG. 26C

OD-START-STREAM:

Field	Description	Format	Example
Set top box ID	A unique identifier for the set top box that terminated the On-Demand session. The recommended set top ID is the MAC address for the device.	Variable length string	01:02:03:04:05:06
Session ID	A unique identifier established between the On-Demand system and the set top box.	Variable-length string	0123456789
Timestamp	The time/date when On-Demand session started in GMT.	MM/DD/YYYY HH:MM: SS.MMM	01/23/2003 20:55:20.123
Stream ID	A unique identifier created by the On-Demand system that identifies the stream.	Variable-length string	9876543210
Program/Asset ID	A unique identifier assigned by the On-Demand system that indicates the program, movie or other asset within the On-Demand system.	Variable-length string	ABC123
Program/Asset Title	The title of the program or asset.	Variable-length string	Today Show
Program/Asset Type	The type of program or asset being played out by the On-Demand system.	1 – MOD (Movies on demand) 2 – FVOD (Free video on demand) 3 – PPV (Pay per view event) 4 – AD (Streamed advertisement) 5 – LAD (Long form streamed ad) 6 – TAD (Targeted advertisement) 99 – Other	2
Station/Studio ID	A unique identifier assigned by the On-Demand system that indicates the originating station, studio, etc. within the On-Demand system.	Variable-length string	DEF456
Station/Studio Name	The name of the station or studio.	Variable-length string	WNBC
Genre	The rating for this program/asset as defined by the MPAA.	Variable-length string	TalkShow
MPA Rating	The MPA rating for the program or asset being played out by the On-Demand system.	Variable-length string	TVPG

FIG. 26D

OD-STOP-STREAM:

Field	Description	Format	Example
Set top box ID	A unique identifier for the set top box that terminated the On-Demand session. The recommended set top ID is the MAC address for the device.	Variable length string	01:02:03:04:05:06
Session ID	A unique identifier established between the On-Demand system and the set top box.	Variable-length string	0123456789
Timestamp	The time/date when a stream has stopped being delivered to a set top box in GMT.	MM/DD/YYYY HH:MM: SS.MMM	01/23/2003 20:55:20.123
Stream ID	A unique identifier created by the On-Demand system that identifies the stream.	Variable-length string	9876543210

FIG. 26E

OD-NAVIGATION:

Field	Description	Format	Example
Set top box ID	A unique identifier for the set top box that terminated the On-Demand session. The recommended set top ID is the MAC address for the device.	Variable length string	01:02:03:04:05:06
Session ID	A unique identifier established between the On-Demand system and the set top box.	Variable-length string	0123456789
Timestamp	The time/date when navigation vent occurred in GMT.	MM/DD/YYYY HH:MM: SS.MMM	01/23/2003 20:55:20.123
Navigation Code	A code that signifies the usage of the navigation system.	1 – Select/OK 2 – Up arrow 3 – Down arrow 4 – Left arrow 5 – Right arrow 99 – Other	1

FIG. 26F

OD-TRICKMODE:

Field	Description	Format	Example
Set top box ID	A unique identifier for the set top box that terminated the On-Demand session. The recommended set top ID is the MAC address for the device.	Variable length string	01:02:03:04:05:06
Session ID	A unique identifier established between the On-Demand system and the set top box.	Variable-length string	0123456789
Timestamp	The time/date when a trick occurred during an On-Demand session in GMT.	MM/DD/YYYY HH:MM: SS.MMM	01/23/2003 20:55:20.123
Stream ID	A unique identifier created by the On-Demand system that identifies the stream.	Variable-length string	9876543210
Trick	A code that indicates which trick has occurred.	1 – Fast Forward 2 – Rewind 3 – Pause 4 – Play 5 – Resume	1
Offset Timestamp	The offset timestamp is the time the trick occurred relative to the start of the stream.	HH:MM: SS.MMM	01:05:15.225

FIG. 26G

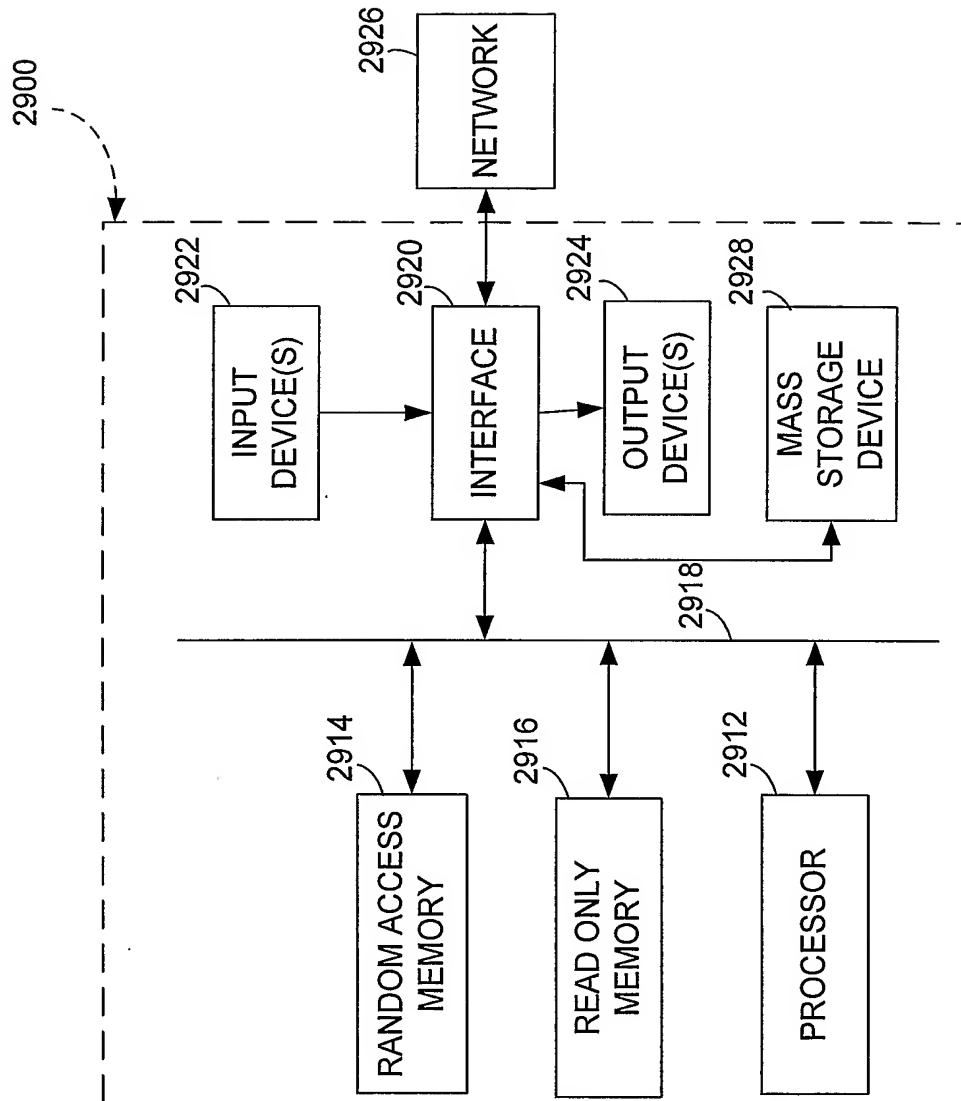


FIG. 27